

AMENDMENTS TO THE CLAIMS

1-12. (cancelled)

13. (currently amended) An integrated anastomosis tool for connecting a graft vessel having a lumen therein to a target vessel, comprising:

a first mechanism configured to create an opening in the target vessel;

a second mechanism configured to complete an anastomosis with the target vessel;

and

a hemostasis chamber through which both said first mechanism and said second

mechanism travel; and

a single control configured to operate both said first mechanism and said second mechanism.

14. (original) The integrated anastomosis tool of claim 13, wherein said first mechanism and said second mechanism are located outside the lumen of the graft vessel.

15. (original) The integrated anastomosis tool of claim 13, wherein said single control is a knob.

16. (original) The integrated anastomosis tool of claim 15, wherein said knob is rotated in a single direction to operate both said first mechanism and said second mechanism.

17. (original) The integrated anastomosis tool of claim 13, further comprising a cam cylinder connected to said single control, said cam cylinder including at least one cam path.

18. (original) The integrated anastomosis tool of claim 17, wherein said first mechanism and said second mechanism each include at least one cam follower configured to engage at least one said cam path on said cam cylinder.

19. (original) The integrated anastomosis tool of claim 17, further comprising a safety switch configured to selectively engage said cam cylinder to prevent substantial rotation of said cam cylinder.

20. (original) The integrated anastomosis tool of claim 17, further comprising a casing at least partially enclosing said first mechanism and said second mechanism, wherein said cam cylinder is located at least partially within said casing.

21. (original) The integrated anastomosis tool of claim 20, wherein said casing includes a stop defined thereon, and wherein said cam cylinder includes a notch configured to engage said stop.

22. (cancelled)

23. (original) The integrated anastomosis tool of claim 13, wherein at least a part of said first mechanism is moved along a first axis to create the opening in the vessel wall, and wherein said at least a part of said first mechanism is configured to move away from said first axis before said second mechanism deploys said anastomosis device.

24. (original) The integrated anastomosis tool of claim 13, wherein at least a part of said first mechanism is moved along a first axis to create the opening in the vessel wall, and wherein at

least a part of said second mechanism is moved from a position away from said first axis to align with said first axis before said second mechanism deploys said anastomosis device.

25. (original) The integrated anastomosis tool of claim 13, further comprising a hollow introducer tip placed at least partially into the opening in the target vessel, wherein at least a portion of said first mechanism and at least a portion of said second mechanism pass through said introducer tip.

26. (original) The integrated anastomosis tool of claim 25, wherein said introducer tip is expandable.

27. (original) The integrated anastomosis tool of claim 13, wherein at least one of said first mechanism and said second mechanism is at least partially lubricated with a biocompatible lubricious substance.

28. (original) The integrated anastomosis tool of claim 27, wherein said lubricious substance is sodium stearate.

29-57. (cancelled)

58. (new) An integrated anastomosis tool for connecting a graft vessel having a lumen therein to a target vessel, comprising:

a first mechanism configured to create an opening in the target vessel;

a second mechanism configured to complete an anastomosis with the target vessel;

and

a single control configured to operate both said first mechanism and said second mechanism;

wherein at least a part of said first mechanism is moved along a first axis to create the opening in the vessel wall, and wherein said at least a part of said first mechanism is configured to move away from said first axis before said second mechanism deploys said anastomosis device.

59. (new) The integrated anastomosis tool of claim 58, wherein said first mechanism and said second mechanism are located outside the lumen of the graft vessel.

60. (new) The integrated anastomosis tool of claim 58, wherein said single control is movable in a single direction to operate both said first mechanism and said second mechanism.

61. (new) The integrated anastomosis tool of claim 58, further comprising a cam cylinder connected to said single control, said cam cylinder including at least one cam path.

62. (new) The integrated anastomosis tool of claim 61, wherein said first mechanism and said second mechanism each include at least one cam follower configured to engage at least one said cam path on said cam cylinder.

63. (new) The integrated anastomosis tool of claim 58, further comprising a hollow introducer tip placed at least partially into the opening in the target vessel, wherein at least a portion of said first mechanism and at least a portion of said second mechanism pass through said introducer tip:

64. (new) The integrated anastomosis tool of claim 64 wherein said introducer tip is expandable.

65. (new) The integrated anastomosis tool of claim 58, wherein at least one of said first mechanism and said second mechanism is at least partially lubricated with a biocompatible lubricious substance.

66. (new) An integrated anastomosis tool for connecting a graft vessel having a lumen therein to a target vessel, comprising:

a first mechanism configured to create an opening in the target vessel;

a second mechanism configured to complete an anastomosis with the target vessel;

and

a single control configured to operate both said first mechanism and said second mechanism;

wherein at least a part of said first mechanism is moved along a first axis to create the opening in the vessel wall, and wherein at least a part of said second mechanism is moved from a position away from said first axis to align substantially with said first axis before said second mechanism deploys said anastomosis device.

67. (new) The integrated anastomosis tool of claim 66, wherein said first mechanism and said second mechanism are located outside the lumen of the graft vessel.

68. (new) The integrated anastomosis tool of claim 66, wherein said single control is movable in a single direction to operate both said first mechanism and said second mechanism.

69. (new) The integrated anastomosis tool of claim 66, further comprising a cam cylinder connected to said single control, said cam cylinder including at least one cam path.

70. (new) The integrated anastomosis tool of claim 69, wherein said first mechanism and said second mechanism each include at least one cam follower configured to engage at least one said cam path on said cam cylinder.

71. (new) The integrated anastomosis tool of claim 66, further comprising a hollow introducer tip placed at least partially into the opening in the target vessel, wherein at least a portion of said first mechanism and at least a portion of said second mechanism pass through said introducer tip.

72. (new) The integrated anastomosis tool of claim 71, wherein said introducer tip is expandable.

73. (new) The integrated anastomosis tool of claim 66, wherein at least one of said first mechanism and said second mechanism is at least partially lubricated with a biocompatible lubricious substance.

74. (new) An integrated anastomosis tool for connecting a graft vessel having a lumen therein to a target vessel, comprising:

a first mechanism configured to create an opening in the target vessel;

a second mechanism configured to complete an anastomosis with the target vessel;

a single control configured to operate both said first mechanism and said second

mechanism; and

a hollow introducer tip configured for placement at least partially into the opening in the target vessel, wherein at least a portion of said first mechanism and at least a portion of said second mechanism pass through said introducer tip.

75. (new) The integrated anastomosis tool of claim 74, wherein said introducer tip is expandable.

76. (new) The integrated anastomosis tool of claim 74, wherein said first mechanism and said second mechanism are located outside the lumen of the graft vessel.

77. (new) The integrated anastomosis tool of claim 74, wherein said single control is movable in a single direction to operate both said first mechanism and said second mechanism.

78. (new) The integrated anastomosis tool of claim 74, further comprising a cam cylinder connected to said single control, said cam cylinder including at least one cam path.

79. (new) The integrated anastomosis tool of claim 78, wherein said first mechanism and said second mechanism each include at least one cam follower configured to engage at least one said cam path on said cam cylinder.

80. (new) The integrated anastomosis tool of claim 74, wherein at least one of said first mechanism and said second mechanism is at least partially lubricated with a biocompatible lubricious substance.

81. (new) An integrated anastomosis tool for connecting a graft vessel having a lumen therein to a target vessel, comprising:

a first mechanism configured to create an opening in the target vessel;

a second mechanism configured to complete an anastomosis with the target vessel;

and

a single control configured to operate both said first mechanism and said second mechanism;

wherein at least one of said first mechanism and said second mechanism is at least partially lubricated with a biocompatible lubricious substance.

82. (new) The integrated anastomosis tool of claim 81, wherein said lubricious substance includes sodium stearate.

83. (new) The integrated anastomosis tool of claim 81, wherein said first mechanism and said second mechanism are located outside the lumen of the graft vessel.

84. (new) The integrated anastomosis tool of claim 81, wherein said single control is movable in a single direction to operate both said first mechanism and said second mechanism.

85. (new) The integrated anastomosis tool of claim 81, further comprising a cam cylinder connected to said single control, said cam cylinder including at least one cam path.

86. (new) The integrated anastomosis tool of claim 85, wherein said first mechanism and said second mechanism each include at least one cam follower configured to engage at least one said cam path on said cam cylinder.

87. (new) The integrated anastomosis tool of claim 86, wherein said cam cylinder is at least partially lubricated with said lubricious substance.